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AN INAUGURAL DISSERTATION

ON THE

USE OF MERCURY

IN

FEVERS.

✓
BY JOHN H. CAMP,

OF VIRGINIA;

HONORARY MEMBER OF THE PHILADELPHIA MEDICAL SOCIETY.

21372

The greatest desideratum in medicine is to discover a mode of rendering
a salivation certain. *Rush.*

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AN INAUGURAL DISSERTATION

FOR

THE DEGREE

OF

DOCTOR OF MEDICINE:

SUBMITTED

TO THE EXAMINATION

OF THE

REVEREND JOHN ANDREWS, D. D. Provost,

(PRO TEMPORE),

THE

TRUSTEES, AND MEDICAL PROFESSORS

OF THE

UNIVERSITY OF PENNSYLVANIA,

ON THE FIFTH DAY OF JUNE, ONE THOUSAND EIGHT
HUNDRED AND FOUR.

AND TO DOCTOR WILLIAM TURNELL,

OF REEFIELD, VIRGINIA.

It is with the highest consideration of your character as a physician, and a gentleman, that I affix your name to this, the first fruits of an education commenced under your kind instructions; and I hope, sir, that you will receive this as a small testimony of respect for the numerous obligations and the polite attention received from you and your amiable consort, while a resident in your family, which shall ever be remembered with gratitude. That you may long continue to enjoy an uninterrupted series of happiness is the wish of your sincere friend, and grateful pupil,

JOHN H. CAMP.

TO DOCTOR WILLIAM PURNELL,

OF BELFIELD, VIRGINIA.

IT is with the highest consideration of your character as a physician, and a gentleman, that I affix your name to this, the first fruits of an education commenced under your kind instructions; and I hope, sir, that you will receive this as a small testimony of respect for the numerous obligations and the polite attention received from you and your amiable consort, while a resident in your family, which shall ever be remembered with gratitude. That you may long continue to enjoy an uninterrupted series of happiness is the wish of your sincere friend, and grateful pupil,

JOHN H. CAMP.

TO

BENJAMIN SMITH BARTON, M. D.

PROFESSOR

OF MATERIA MEDICA, NATURAL HISTORY, AND BOTANY

IN THE

UNIVERSITY OF PENNSYLVANIA,

THIS ESSAY IS ALSO INSCRIBED AS A MARK OF

ESTEEM FROM HIS FRIEND,

THE AUTHOR.

AN INAUGURAL DISSERTATION
ON
THE USE OF MERCURY IN FEVERS.

THE practice of giving Mercury in Fevers is not of ancient date: it was much employed in the fifteenth century. Yet it did not become of extensive use until very late, and the practice of giving Mercury in Fevers with a view to salivate, may be justly considered as a most important æra in the science of medicine.

An author who wrote as late as 1774, declares a salivation should be avoided by every physician that has the welfare of his patient at heart.* Previous to this erroneous assertion he speaks of our medicine with the greatest encomiums. "There is," says he, "no temperament, constitution, sex, or period of life, exempt from receiving benefit from Mercury, or some of its preparations; and I do not know a disease inci-

* Flack,

dent to mankind, where it can, with propriety, be deemed improper, unless used to excess or disproportioned to circumstances."

Doctor Chisholm, of the island of Grenada, speaks highly of the use of Mercury in the bilious malignant Fever of the West-Indies, which is the same disease as the Yellow Fever of this country. He found it necessary and safe to use large quantities of this medicine; he even gave it in combination with the bark, and he never prescribed the bark without combining it with Mercury.

It is to Doctor Chisholm that we are principally indebted, for the liberal use of Mercury in the Yellow Fever. "If," says he, "a salivation in the Boullam Fever was speedily raised, the danger was removed, and the patient recovered." Bleeding, he says, could not be borne, although the blood was florid, and there appeared an inflammatory crust, (in which it differed from the Yellow Fever of 1793, in Philadelphia, where an inflammatory crust was seldom observed) the consequence of a few moments delay in the exhibition of Mercury, was almost invariably, death. This practice was opposed by many eminent physicians; but from the repeated advantages experienced every day by every practitioner that is in the habit of using Mercury, it has become, or soon will be in very general use.

In the history of an uncommon epidemic fever that appeared in the island of Grenada, Doctor Chisholm observes, "When the disease was attended with great restlessness, raving, drowsiness, or seeming inclination to sleep, delirium, a sudden recollection, immediately succeeded by lethargic heaviness, an excessive, almost insupportable heat at the præcordia, whilst the extremities were cold and clammy, the danger was great indeed." In this deplorable situation, if the Mercury did not act on the salivary glands, death was soon to be expected: on the contrary, even with those alarming symptoms, if a salivation came on, the recovery of the patient might be depended on, and was declared to be out of danger; and it is extraordinary, that not a single patient relapsed that was cured by a salivation.

And what can be said as much in favour of any other medicine? For how often do we see relapses take place when fevers have been cured by the bark?

Doctor Chisholm concludes by saying, "that he has found Mercury and Opium excellent in this disease, and the only remedies in which he could confide in."

Doctor Rush says, he was led to the use of Mercury in malignant Fevers, from observing a favorable issue in every case in which a spontaneous salivation took place from the salivary glands, and

that all of his patients (one excepted) that were salivated by the Mercurial purges, recovered in a few days. After this, the Doctor says in every case he attempted to excite a salivation as soon as possible, and in every instance where a salivation was excited, the patient recovered.*

Since that time, the doctor has continued the use of Mercury with the happiest effects, and in his treatise on the Yellow Fever, of 1797, he says, "However powerful venisection and purging were in the cure of this Fever, they often required the aid of a salivation to assist them in subduing it.†"

Mr. Write, who practiced in the Boullam Fever, declares he did not lose a single patient where a quantity of Mercury was used sufficient to excite a salivation.

Doctor Wade, in a paper on the epidemical Fevers of Bengal observes, that Mercury exhibited so as to affect the mouth, has uniformly proved successful.‡

Doctor James Clark of Dominico, in a letter on a violent malignant Yellow Fever of that place, speaks principally of Mercury as the remedy he found the most successful. His practice was, after evacuating

* Doctor Rush's Works, vol. iii. p. 289.

† *Ibid.* vol. v. p. 112.

‡ Vol. xviii. Medical Com.

the stomach, to give calomel every two or three hours, and in urgent cases he had recourse to Mercurial friction until the violence of the symptoms was abated. "If," says he, "I can, by any means, introduce a sufficient quantity of Mercury into the habit in time, so as to affect the mouth and gums, I have no hesitation in declaring my patients out of danger."* In an account of an epidemic (commonly called Yellow Fever) lately prevalent in Boston, by Doctor Reind, his practice was, after evacuating the intestines, to give two or three grains of calomel every two hours, or oftener, according to the urgency of the symptoms, with an intention to excite a salivation, and upon the appearance of the salivating effects, the dangerous symptoms vanished. Scarcely any patient "where the effects of Mercury on the salivary glands were evident but what recovered."†

Doctor Hamilton, a respectable physician of Lynne Regis, recommends the use of Mercury in all inflammatory diseases. His practice was first to deplete by venesection and cathartics, and then to give calomel and opium combined. This practice he found successful in inflammatory fevers, pneumonia, gout, rheumatism, &c.

I think we may justly conclude, that experience has nearly established that Mercury is one of the

* Medical Facts, vol. vii. p. 10.

† Med. Repository.

greatest auxiliaries to the lancet, and when combined, that they are capable of subduing the most formidable states of Fever. Mercury as an evacuant of bile in Yellow Fever, has been emphatically called, the “Key of the Hepatic System.” Some will ask, why use Mercury in a disease which is so rapid in its progress, when we know it to be a medicine so slow in producing its effects, and that it so frequently fails?

Doctor Chisholm has proved, that this is not the case in the West Indies. On the contrary, that it is extremely certain and speedy in producing a salivation; and we have the most respectable authority, that violent diseases often yield to this medicine where every thing else had been tried in vain: nor does the use of Mercury prevent our using other remedies.

Mercury has been recommended in the strongest terms in common intermittents.

Doctor Clark says, “When agues by their long continuance have brought on visceral obstructions, threatening a fatal determination under the form of jaundice, dropsy, &c. nothing can preserve the patient from impending destruction, except a judicious course of Mercury.*

Doctor Wright, in some practical observations on the treatment of acute diseases, observes,

* Diseases of hot climates.

“Where intermittents have been neglected, or improperly treated, or where the bark so far from being of service, has served only to load the stomach, or has been rejected, I have suspected some visceral obstruction, and in such cases calomel, in small doses, has had the happiest effect, and the patients have generally recovered without the assistance of any medicine.”*

In obstinate and long protracted intermittents, I am informed it was the practice of a respectable physician of Philadelphia: I mean Doctor Thomas Bond. In the Pennsylvania hospital, when they resisted the power of the bark, it was his practise to put his patients under a slight course of Mercury: after which, the bark always succeeded.

Doctor Munroe mentions a case of intermittent Fever that resisted all the usual remedies until a Mercurial salivation was excited, it was then readily cured by the bark.

In a passage from Bengal to England, Doctor M'Lain was seized with a quotidian intermittent, the usual remedies were resorted to in vain. Under this mode of treatment, he says, “I daily became weaker, and in the course of three weeks, during which time the same practice was persisted in, my

* Medical Facts, vol. vii. p. 13.

legs became swelled, the paroxysm more severe, and I could with difficulty rise out of bed.”*

In this situation he abandoned his usual practice, and had recourse to a Mercurial course : he had a large quantity of Mercurial unguent rubbed in at bed-time, and continued three or four times ; the consequence of which was an almost instantaneous recovery. The issue of this experiment led him to the free use of Mercury, and he has found it to answer his most anxious expectation.

To the politeness of Doctor Wilson, of Richmond, I am indebted for the following case : The doctor was called to visit a lady, who had, for a long time laboured under an obstinate intermittent fever. He gave her a Mercurial cathartic chiefly with a view to its purgative quality. Contrary to his expectations, it did not operate as a cathartic, but excited a salivation, and the consequence was, the patient's immediate recovery. He was accused of giving his patient Mercury, and nothing but her speedy recovery shielded him from the abuse of his patient's husband and friends.

The history of this case is very illustrative of the beneficial effects of Mercury in the obstinate intermittents of the southern states, where a liberal use of Mercury is called for, but the reverse of this is

unfortunately the case, and if a patient recovers by the use of this medicine, it is ascribed to chance, and not to the judicious prescription of the physician.

Calomel has become of very extensive use as a cathartic, and is in the hands of every physician. Unquestionably its salutary effects are not alone to be attributed to its cathartic operation (as we see in the patient of Doctor Wilson) but partly as other preparations, by its general action on the system.

Doctor Rush says, he has used Mercury in Typhus with manifest advantage.

To illustrate the salivary operation of Mercury, in Fevers, I beg leave to extract the following from a journal kept on a passage from Bengal to England: "In June 1791, we had from thirty to forty sailors, ill of fevers, catarrhs, and rheumatisms, and many more trifling ailments, whose cases were not entered on the journal. The similarity of their diseases and treatment rendered it unnecessary to record any, excepting the most dangerous. In every case in which Mercury was given, so as to produce salivation, the pulse rose, and all complaints gave way as soon as the mouth was thoroughly affected."*

The following observations were made on a passage to India. "In every case of low fever which

* Science of Life, p. 169.

occurred among the soldiers, from the moment the mouth was affected from the use of Mercury, a recovery commenced." Here it was used only externally, and they were not always able to excite salivation; and its failure in some cases may be attributed to not using it internally as well as externally.

We come now to the consideration of the use of Mercury in pulmonary consumption, a disease prevalent in almost every country; and it is unnecessary for me to expatiate in this place, on its ravages, and its being the terror and destroyer not only of many of our most respectable citizens, but of whole families.

The counter action of Mercury being so great when a salivation can be excited, that it may be considered as a radical remedy in this disease. But here we have to lament the difficulty and uncertainty of effecting a salivation, for certain constitutions; and children are almost unsusceptible to the influence of Mercury; "And" says Dr. Rush, "the greatest desideratum in medicine is to discover a mode of rendering salivation certain, or a certain mode of salivating.

In the Pennsylvania Hospital Dr. Rush has made several trials with our medicine, and has frequently found it an effectual remedy when success was despaired of, as the two following cases will shew.

CASE I.

William Kairns, a sailor, aged about twenty-six years, was admitted into the Pennsylvania Hospital, in the second stage of pulmonary consumption. Several of his relations had died of that disease. As his pulse was active "I ordered," says Dr. Rush, "eight ounces of blood to be drawn from his arm the second day after his admission, and to be repeated in five days." He was directed to live chiefly on milk and vegetables and to take the "antimonial powder"* three times a day, contrary to the intention of the Doctor. Sixteen doses of this powder brought on a salivation, which suddenly put a stop to his cough, and removed every other symptom of his pulmonary disease, and he was discharged, cured, on the 10th January 1801.

CASE II.

On the 17th January 1801, William Poole aged twenty-three years, formerly a merchant's clerk, was admitted into the Pennsylvania Hospital, in the third

* Take 1 Nitr. Pot. grs. xv. ant. tart. 1-6. Muri. Mer. grs. ℥.

or apparently the last stage of pulmonary consumption, with a distressing cough, especially in the night. He was much emaciated and had frequent chills, with constant sweats : his pulse forbade bleeding: the antimonial powder was prescribed and Mercurial unguent was ordered to be applied to his side and breast. In a few days he began to complain of swelled jaws and great pain in his teeth; from thence, his cough, fever, chills, and sweats left him. Cordial drinks and diet were offered him to restore him to his former health, and he was discharged well on the second of May.

The history of these two cases decidedly proves the powerful operation of Mercury in pulmonary consumption. We see in the case of *Kairns* a powerful hereditary consumption perfectly cured in about three weeks, and the deplorable case of *Poole*, who it is probable was abandoned by his physicians and despaired of by his friends, perfectly restored to his former health. Those two cases alone (besides many others corroborating) should induce every practitioner [to a trial of our medicine, in a disease that has baffled the skill of the most learned physicians, for ages past.

Most of the dread of this disease, I am induced to believe, will soon vanish, when we find it will seldom fail of being cured when Mercury is properly admi-

nistered, aided by the lancet, and accommodated to its different grades and states of the pulse.

A salivation is a remedy of nature; a spontaneous salivation has cured many of our most formidable diseases. It frequently marks the crisis of malignant fevers, and it is by this means that nature often tries to relieve herself, and it is to be lamented that we have not this "Sampson" of the *Materia Medica* more at command to aid Nature in her operations. I do not by this wish it to be understood that I am an advocate for nature in the cure of diseases....for I am convinced that numberless are the unhappy patients that have unfortunately fell victims to diseases that required but little attention, from their too credulous physician in all their prescriptions endeavouring to pursue the footsteps of Nature.

I might go on throughout the whole nosological arrangement of diseases, enumerating the beneficial effects of Mercury, but if I was even disposed to pursue the subject, the limits prescribed to this essay would not permit such a thing, therefore I shall conclude this part of my subject by observing that hepatites, dysentery,* gout, rheumatism, and many other diseases have yielded in their turn to this "*ipse agmen*;" particularly the two former diseases, in which Mercury is

* Vide Clark on the diseases of hot climates.

liberally prescribed by many of the most reputable practitioners.

An inquiry into the Modus Operandi of Mercury.

On the introduction of a new medicine into practice, the first inquiry that is made is its modus operandi, or the manner in which it produces its salutary effects, and how Mercury acted in curing diseases (particularly the venereal) was for a long time considered as one of the most inexplicable phenomena in the science of medicine; yet as difficult as the subject appeared, many ingenious and beautiful hypothetical theories have been brought forward to explain its modus operandi in curing the lues venerea.

It was at one time supposed it acted by its specific gravity, an experiment that proved that one grain of corrosive sublimate dissolved in eight ounces of water, was rendered sensible in every drop of that water, completely disproved this; for how is it possible that the quantity of Mercury contained in one drop of water should operate by its gravity. Does not the cure of venereal chancres and ulcers sufficiently disprove this opinion?

The operation of Mercury as an antidote agitated the schools of medicine for a long time.

If this be the case, why does it not always cure the disease? And if it was the case the greater the quantity thrown into the system, the more readily and certain would be the cure. So far from this being the case, it frequently fails, and even when taken in the largest quantities; and we sometimes find preparations that contain the smallest quantity of Mercury, prove the most effectual. This alone in my opinion decidedly disproved both the above advanced theories.

Dr. Cullen's opinion should always be treated with respect. He supposed that Mercury united to the amonical salts of the serosity of the blood, and this is the reason he says "that Mercury is so much, and more universally than any other medicine, disposed to pass off by the various excretions of the body*;" and if we allow this it will explain why Mercury so readily passes to the salivary glands, and by acting on the salivary glands he believed the disease was thrown off by the mouth. Though this hypothesis of the Edinburgh Professor might at first sight appear plausible, and well founded, it cannot be admitted, for we know Mercury frequently cures diseases (as the venereal) without exciting a salivation, merely by touching the mouth.

* Cullen's Materia Medica, Vol. ii. p. 252.

We shall next take notice of the chimerical opinion of Dr. Swediaur. He supposed that Mercury united to the venereal virus by a chemical elective attraction, and produced an innocent tertium quid. "We know," he says, "that Mercury possesses a certain specific power in destroying the venereal virus, but we are quite uncertain whether it acts by its sedative, astringent, or evacuent quality, or if not, perhaps rather by a chemical elective attraction, whereby both substances uniting to one another, are changed into a third, which is no more hurtful, but has some new properties distinct from those which any of them had before they were united.*

In a treatise on Mercury, by C. Maclean, a solution of this question is attempted, but like most others of his predecessors, it exists only in his imagination. He founded his opinions on the elegant system of the illustrious, but the unfortunate author of the *Elementæ Medicinæ*, whose principles are warmly espoused by him: he supposes that Mercury acts merely by its general stimulating quality, thereby increasing or supporting the excitement of the whole system. Perhaps this might be admitted in its cure of fevers, or disease in general; but this cannot explain its operation in the cure of lues. If this was the case, we should find a remedy in opium, wine,

* Cullen's *M. Medica*, vol. ii. p. 2.

alkohol, and all other powerful stimulants, and make their only difference to consist in the degree of their stimulating power.

Many other ingenious opinions have been advanced on the operation of Mercury, but it would be unnecessary in me to attempt to record them all in this place. It will suffice me by attempting an explanation of the one that is now generally received. I mean the ingenious theory of Mr. John Hunter, and here I think a just explanation cannot be given without calling in the aid of specifics, or a specific operation, for I think it cannot be denied but that Mercury acts specifically on the salivary glands. And the specific operation of Mercury on those glands being so great, is sufficiently powerful to overcome the fatal action of disease, by diverting it to those parts.

This is agreeable to the opinion of Mr. Hunter. He supposed (in the cure of the venereal) that a morbid action similar to that excited by the venereal virus on the genital parts, is produced on other parts, as the throat and mouth, and that by this means a new or different action is excited whereby the disease is cured, or suspended; for according to his opinion, no two fevers can exist in the same constitution; nor two local diseases in the same part at the same time.

We find Doctor Rush corroborating this opinion. In a treatise on the Yellow Fever, where,

speaking of the use of Mercury, he says, " I ascribed its solitary effects when a salivation was excited in the first stage of the disorder, to the excitement of inflammation and effusion in the throat ; thereby diverting morbid excitement from parts less essential to life."*

With this I conclude this essay, and although I am conscious of its numerous imperfections, I am consoled when I think that a subject of such importance could not, with justice, be treated only by the pen of the ablest medical writers ; therefore it could not be expected, that a mere Tyro in medicine, could do justice to such a subject.

Permit me, before I take my leave, Illustrious Professors, to offer you my most sincere acknowledgments, for the innumerable advantages I have derived while attending your lectures ; and wishing that each and every one of you may obtain that happiness which your indefatigable exertions in the promulgation of the healing art, so justly entitles you to, I bid you a final adieu.

* Rush's Med. Ob. p. 289.

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